SEQUENCE LISTING

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Andrew T. Watt
William Ricketts
Nicholas M. Dean

<120> ANTISENSE MODULATION OF FLIP-C EXPRESSION

<130> RTS-0202

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Met Ala Gln Ser Pro Val Ser Ala Glu Val Ile His
1 5 10

cag gtg gaa gag tgt ctt gat gaa gac gag aag gag atg atg ctc ttc 158
Gln Val Glu Glu Cys Leu Asp Glu Asp Glu Lys Glu Met Met Leu Phe
15 20 25

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ctg tgt aga gat gtg act gag aac ctg gct gca cct aac gtc agg gac      206
Leu Cys Arg Asp Val Thr Glu Asn Leu Ala Ala Pro Asn Val Arg Asp
     30                  35                  40

ctc ctg gat agc tta agt gag aga ggc cag ctc tct ttt gct acc ttg      254
Leu Leu Asp Ser Leu Ser Glu Arg Gly Gln Leu Ser Phe Ala Thr Leu
 45                  50                  55                  60

gct gaa ttg ctc tac aga gtg agg cgg ttt gac ctt ctc aag agg atc      302
Ala Glu Leu Leu Tyr Arg Val Arg Arg Phe Asp Leu Leu Lys Arg Ile
                 65                  70                  75

ttg aag aca gac aaa gca acc gtg gag gac cac ctg cgc aga aac cct      350
Leu Lys Thr Asp Lys Ala Thr Val Glu Asp His Leu Arg Arg Asn Pro
             80                  85                  90

cac ctg gtt tct gat tat agg gtc ctg ctg atg gag att ggt gag agc      398
His Leu Val Ser Asp Tyr Arg Val Leu Leu Met Glu Ile Gly Glu Ser
         95                  100                 105

tta gat cag aac gat gta tcc tcc tta gtt ttc ctt aca agg att aca      446
Leu Asp Gln Asn Asp Val Ser Ser Leu Val Phe Leu Thr Arg Ile Thr
     110                 115                 120

agg gat tac aca ggc aga ggc aag ata gcc aag gac aag agt ttc ttg      494
Arg Asp Tyr Thr Gly Arg Gly Lys Ile Ala Lys Asp Lys Ser Phe Leu
125                 130                 135                 140

gat ctg gtg att gaa ttg gag aaa ctg aat cta att gct tca gac caa      542
Asp Leu Val Ile Glu Leu Glu Lys Leu Asn Leu Ile Ala Ser Asp Gln
                145                 150                 155

ttg aat ttg tta gaa aaa tgc ctg aag aac atc cac aga ata gac ttg      590
Leu Asn Leu Leu Glu Lys Cys Leu Lys Asn Ile His Arg Ile Asp Leu
            160                 165                 170

aac aca aag atc cag aag tac acc cag tcc agc caa gga gca aga tca      638
Asn Thr Lys Ile Gln Lys Tyr Thr Gln Ser Ser Gln Gly Ala Arg Ser
        175                 180                 185

aat atg aat act ctc cag gct tcg ctc cca aaa ttg agt atc aag tat      686
Asn Met Asn Thr Leu Gln Ala Ser Leu Pro Lys Leu Ser Ile Lys Tyr
    190                 195                 200

aac tca agg ctc cag aat ggg cga agt aaa gag cca aga ttt gtg gaa      734
Asn Ser Arg Leu Gln Asn Gly Arg Ser Lys Glu Pro Arg Phe Val Glu
205                 210                 215                 220

tac cgt gac agt caa aga aca ctg gtg aag aca tcc atc cag gaa tca      782
Tyr Arg Asp Ser Gln Arg Thr Leu Val Lys Thr Ser Ile Gln Glu Ser
                225                 230                 235

gga gct ttt tta cct ccg cac atc cgt gaa gag act tac agg atg cag      830
Gly Ala Phe Leu Pro Pro His Ile Arg Glu Glu Thr Tyr Arg Met Gln
            240                 245                 250

agc aag ccc cta gga atc tgc ttg atc att gat tgt att ggc aac gac      878
Ser Lys Pro Leu Gly Ile Cys Leu Ile Ile Asp Cys Ile Gly Asn Asp
        255                 260                 265

aca aaa tat ctt caa gag acc ttc act tcc ctg ggc tat cat atc cag      926
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Leu Phe Leu Phe Pro Lys Ser His Asp Ile Thr Gln Ile Val Arg Arg
285                 290                 295                 300

tat gca agt atg gcc caa cat caa gac tat gac agc ttt gca tgt gtt  1022
Tyr Ala Ser Met Ala Gln His Gln Asp Tyr Asp Ser Phe Ala Cys Val
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ctg gtg agc cta gga ggc tcc caa agc atg atg ggc aga gat caa gtt  1070
Leu Val Ser Leu Gly Gly Ser Gln Ser Met Met Gly Arg Asp Gln Val
            320                 325                 330

cac tca ggg ttc tcc ttg gat cat gtc aag aac atg ttc acg ggg gac  1118
His Ser Gly Phe Ser Leu Asp His Val Lys Asn Met Phe Thr Gly Asp
        335                 340                 345

acg tgc cct tct ctc aga ggg aag cca aag ctc ttt ttt att cag aac  1166
Thr Cys Pro Ser Leu Arg Gly Lys Pro Lys Leu Phe Phe Ile Gln Asn
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tat gag tcg tta ggt agc cag ttg gaa gat agc agc ctg gag gta gat  1214
Tyr Glu Ser Leu Gly Ser Gln Leu Glu Asp Ser Ser Leu Glu Val Asp
365                 370                 375                 380

ggg cca tca ata aaa aat gtg gac tct aag ccc ctg caa ccc aga cac  1262
Gly Pro Ser Ile Lys Asn Val Asp Ser Lys Pro Leu Gln Pro Arg His
                385                 390                 395

tgc aca act cac cca gaa gct gat atc ttt tgg agc ctg tgc aca gca  1310
Cys Thr Thr His Pro Glu Ala Asp Ile Phe Trp Ser Leu Cys Thr Ala
            400                 405                 410

gac gta tct cac ttg gag aag ccc tcc agc tca tcc tct gtg tat ctg  1358
Asp Val Ser His Leu Glu Lys Pro Ser Ser Ser Ser Ser Val Tyr Leu
        415                 420                 425

cag aag ctc tcc cag cag ctg aag caa ggc agg aga cgc cca ctc gtg  1406
Gln Lys Leu Ser Gln Gln Leu Lys Gln Gly Arg Arg Arg Pro Leu Val
    430                 435                 440

gac ctc cac gtt gaa ctc atg gac aaa gtg tat gcg tgg aac agt ggt  1454
Asp Leu His Val Glu Leu Met Asp Lys Val Tyr Ala Trp Asn Ser Gly
445                 450                 455                 460

gtt tcg tct aag gag aaa tac agc ctc agc ctg cag cac act ctg agg  1502
Val Ser Ser Lys Glu Lys Tyr Ser Leu Ser Leu Gln His Thr Leu Arg
                465                 470                 475

aag aaa ctc atc ctg gct cct acg tga gaaccccaga ccgttggtgt        1549
Lys Lys Leu Ile Leu Ala Pro Thr
            480                 485

tcttggtata tcatccaggg tggcggcttg gagcagagct tggcggttac ggctgcttct  1609

ggctgcttct ggctctgccg tgagtcctgg cctagggttc tcctgtgcac aggcatgagc  1669

cgtaaccctg tgcctgggaa acgtctcact cccgccgccg tgcctttacc tctctaaact  1729
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tcagggagac cacccagaag gaaagagccc atactttcaa tcttaggcat aagttagctt 120

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gataagattt tcagaaaaat tccctttaa ccacagaact cccccactgg aaaggattct    180

gaaagaaatg aagtcagccc tcagaaatga agttgactgc ctgctggctt tctgttgact    240

ggcccggagc tgtactgcaa gacccttgtg agcttcccta gtctaagagt agg atg        296
                                                            Met
                                                             1

tct gct gaa gtc atc cat cag gtt gaa gaa gca ctt gat aca gat gag       344
Ser Ala Glu Val Ile His Gln Val Glu Glu Ala Leu Asp Thr Asp Glu
              5                  10                  15

aag gag atg ctg ctc ttt ttg tgc cgg gat gtt gct ata gat gtg gtt       392
Lys Glu Met Leu Leu Phe Leu Cys Arg Asp Val Ala Ile Asp Val Val
         20                  25                  30

cca cct aat gtc agg gac ctt ctg gat att tta cgg gaa aga ggt aag       440
Pro Pro Asn Val Arg Asp Leu Leu Asp Ile Leu Arg Glu Arg Gly Lys
     35                  40                  45

ctg tct gtc ggg gac ttg gct gaa ctg ctc tac aga gtg agg cga ttt       488
Leu Ser Val Gly Asp Leu Ala Glu Leu Leu Tyr Arg Val Arg Arg Phe
 50                  55                  60                  65

gac ctg ctc aaa cgt atc ttg aag atg gac aga aaa gct gtg gag acc       536
Asp Leu Leu Lys Arg Ile Leu Lys Met Asp Arg Lys Ala Val Glu Thr
                 70                  75                  80

cac ctg ctc agg aac cct cac ctt gtt tcg gac tat aga gtg ctg atg       584
His Leu Leu Arg Asn Pro His Leu Val Ser Asp Tyr Arg Val Leu Met
             85                  90                  95

gca gag att ggt gag gat ttg gat aaa tct gat gtg tcc tca tta att       632
Ala Glu Ile Gly Glu Asp Leu Asp Lys Ser Asp Val Ser Ser Leu Ile
        100                 105                 110

ttc ctc atg aag gat tac atg ggc cga ggc aag ata agc aag gag aag       680
Phe Leu Met Lys Asp Tyr Met Gly Arg Gly Lys Ile Ser Lys Glu Lys
    115                 120                 125

agt ttc ttg gac ctt gtg gtt gag ttg gag aaa cta aat ctg gtt gcc       728
Ser Phe Leu Asp Leu Val Val Glu Leu Glu Lys Leu Asn Leu Val Ala
130                 135                 140                 145

cca gat caa ctg gat tta tta gaa aaa tgc cta aag aac atc cac aga       776
Pro Asp Gln Leu Asp Leu Leu Glu Lys Cys Leu Lys Asn Ile His Arg
                150                 155                 160

ata gac ctg aag aca aaa atc cag aag tac aag cag tct gtt caa gga       824
Ile Asp Leu Lys Thr Lys Ile Gln Lys Tyr Lys Gln Ser Val Gln Gly
            165                 170                 175

gca ggg aca agt tac agg aat gtt ctc caa gca gca atc caa aag agt       872
Ala Gly Thr Ser Tyr Arg Asn Val Leu Gln Ala Ala Ile Gln Lys Ser
        180                 185                 190

ctc aag gat cct tca aat aac ttc agg atg ata aca ccc tat gcc cat       920
Leu Lys Asp Pro Ser Asn Asn Phe Arg Met Ile Thr Pro Tyr Ala His
    195                 200                 205
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tgt cct gat ctg aaa att ctt gga aat tgt tcc atg tga ttaacatgga       969
Cys Pro Asp Leu Lys Ile Leu Gly Asn Cys Ser Met
210                 215                 220

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aaaaaaaaaa aaaaaaaact cgaggggggg ccc                                1062
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gcccagcacc aagtccgctt ccaggctttc ggtttctttg cctccatctt gggtgcgcct    180

tcccggcgtc taggggagcg aaggctgagg tggcagcggc aggagagtcc ggccgcgaca    240

ggacgaactc ccccactgga aaggattctg aaagaaatga agtcagccct cagaaatgaa    300

gttgactgcc tgctggcttt ctgttgactg gcccggagct gtactgcaag acccttgtga    360

gcttccctag tctaagagta gg atg tct gct gaa gtc atc cat cag gtt gaa      412
                        Met Ser Ala Glu Val Ile His Gln Val Glu
                          1               5                  10

gaa gca ctt gat aca gat gag aag gag atg ctg ctc ttt ttg tgc cgg      460
Glu Ala Leu Asp Thr Asp Glu Lys Glu Met Leu Leu Phe Leu Cys Arg
                15                  20                  25

gat gtt gct ata gat gtg gtt cca cct aat gtc agg gac ctt ctg gat      508
Asp Val Ala Ile Asp Val Val Pro Pro Asn Val Arg Asp Leu Leu Asp
            30                  35                  40

att tta cgg gaa aga ggt aag ctg tct gtc ggg gac ttg gct gaa ctg      556
Ile Leu Arg Glu Arg Gly Lys Leu Ser Val Gly Asp Leu Ala Glu Leu
        45                  50                  55

ctc tac aga gtg agg cga ttt gac ctg ctc aaa cgt atc ttg aag atg      604
Leu Tyr Arg Val Arg Arg Phe Asp Leu Leu Lys Arg Ile Leu Lys Met
    60                  65                  70

gac aga aaa gct gtg gag acc cac ctg ctc agg aac cct cac ctt gtt      652
Asp Arg Lys Ala Val Glu Thr His Leu Leu Arg Asn Pro His Leu Val
75                  80                  85                  90

tcg gac tat aga gtg ctg atg gca gag att ggt gag gat ttg gat aaa      700
Ser Asp Tyr Arg Val Leu Met Ala Glu Ile Gly Glu Asp Leu Asp Lys
                95                  100                 105

tct gat gtg tcc tca tta att ttc ctc atg aag gat tac atg ggc cga      748
Ser Asp Val Ser Ser Leu Ile Phe Leu Met Lys Asp Tyr Met Gly Arg
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                110                 115                 120

ggc aag ata agc aag gag aag agt ttc ttg gac ctt gtg gtt gag ttg      796
Gly Lys Ile Ser Lys Glu Lys Ser Phe Leu Asp Leu Val Val Glu Leu
        125                 130                 135

gag aaa cta aat ctg gtt gcc cca gat caa ctg gat tta tta gaa aaa      844
Glu Lys Leu Asn Leu Val Ala Pro Asp Gln Leu Asp Leu Leu Glu Lys
    140                 145                 150

tgc cta aag aac atc cac aga ata gac ctg aag aca aaa atc cag aag      892
Cys Leu Lys Asn Ile His Arg Ile Asp Leu Lys Thr Lys Ile Gln Lys
155                 160                 165                 170

tac aag cag tct gtt caa gga gca ggg aca agt tac agg aat gtt ctc      940
Tyr Lys Gln Ser Val Gln Gly Ala Gly Thr Ser Tyr Arg Asn Val Leu
                175                 180                 185

caa gca gca atc caa aag agt ctc aag gat cct tca aat aac ttc agg      988
Gln Ala Ala Ile Gln Lys Ser Leu Lys Asp Pro Ser Asn Asn Phe Arg
            190                 195                 200

ctc cat aat ggg aga agt aaa gaa caa aga ctt aag gaa cag ctt ggc     1036
Leu His Asn Gly Arg Ser Lys Glu Gln Arg Leu Lys Glu Gln Leu Gly
        205                 210                 215

gct caa caa gaa cca gtg aag aaa tcc att cag gaa tca gaa gct ttt     1084
Ala Gln Gln Glu Pro Val Lys Lys Ser Ile Gln Glu Ser Glu Ala Phe
    220                 225                 230

ttg cct cag agc ata cct gaa gag aga tac aag atg aag agc aag ccc     1132
Leu Pro Gln Ser Ile Pro Glu Glu Arg Tyr Lys Met Lys Ser Lys Pro
235                 240                 245                 250

cta gga atc tgc ctg ata atc gat tgc att ggc aat gag aca gag ctt     1180
Leu Gly Ile Cys Leu Ile Ile Asp Cys Ile Gly Asn Glu Thr Glu Leu
                255                 260                 265

ctt cga gac acc ttc act tcc ctg ggc tat gaa gtc cag aaa ttc ttg     1228
Leu Arg Asp Thr Phe Thr Ser Leu Gly Tyr Glu Val Gln Lys Phe Leu
            270                 275                 280

cat ctc agt atg cat ggt ata tcc cag att ctt ggc caa ttt gcc tgt     1276
His Leu Ser Met His Gly Ile Ser Gln Ile Leu Gly Gln Phe Ala Cys
        285                 290                 295

atg ccc gag cac cga gac tac gac agc ttt gtg tgt gtc ctg gtg agc     1324
Met Pro Glu His Arg Asp Tyr Asp Ser Phe Val Cys Val Leu Val Ser
    300                 305                 310

cga gga ggc tcc cag agt gtg tat ggt gtg gat cag act cac tca ggg     1372
Arg Gly Gly Ser Gln Ser Val Tyr Gly Val Asp Gln Thr His Ser Gly
315                 320                 325                 330

ctc ccc ctg cat cac atc agg agg atg ttc atg gga gat tca tgc cct     1420
Leu Pro Leu His His Ile Arg Arg Met Phe Met Gly Asp Ser Cys Pro
                335                 340                 345

tat cta gca ggg aag cca aag atg ttt ttt att cag aac tat gtg gtg     1468
Tyr Leu Ala Gly Lys Pro Lys Met Phe Phe Ile Gln Asn Tyr Val Val
            350                 355                 360
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tca gag ggc cag ctg gag gac agc agc ctc ttg gag gtg gat ggg cca 1516
Ser Glu Gly Gln Leu Glu Asp Ser Ser Leu Leu Glu Val Asp Gly Pro
365 370 375

gcg atg aag aat gtg gaa ttc aag gct cag aag cga ggg ctg tgc aca 1564
Ala Met Lys Asn Val Glu Phe Lys Ala Gln Lys Arg Gly Leu Cys Thr
380 385 390

gtt cac cga gaa gct gac ttc ttc tgg agc ctg tgt act gcg gac atg 1612
Val His Arg Glu Ala Asp Phe Phe Trp Ser Leu Cys Thr Ala Asp Met
395 400 405 410

tcc ctg ctg gag cag tct cac agc tca cca tcc ctg tac ctg cag tgc 1660
Ser Leu Leu Glu Gln Ser His Ser Ser Pro Ser Leu Tyr Leu Gln Cys
415 420 425

ctc tcc cag aaa ctg aga caa gaa aga aaa cgc cca ctc ctg gat ctt 1708
Leu Ser Gln Lys Leu Arg Gln Glu Arg Lys Arg Pro Leu Leu Asp Leu
430 435 440

cac att gaa ctc aat ggc tac atg tat gat tgg aac agc aga gtt tct 1756
His Ile Glu Leu Asn Gly Tyr Met Tyr Asp Trp Asn Ser Arg Val Ser
445 450 455

gcc aag gag aaa tat tat gtc tgg ctg cag cac act ctg aga aag aaa 1804
Ala Lys Glu Lys Tyr Tyr Val Trp Leu Gln His Thr Leu Arg Lys Lys
460 465 470

ctt atc ctc tcc tac aca taa gaaaccaaaa ggctgggcgt agtggctcac 1855
Leu Ile Leu Ser Tyr Thr
475 480

acctgtaatc ccagcacttt gggaggccaa ggagggcaga tcacttcagg tcaggagttc 1915

gagaccagcc tggccaacat ggtaaacgct gtccctagta aaaatacaaa aattagctgg 1975

gtgtgggtgt gggtacctgt attcccagtt acttgggagg ctgaggtggg aggatctttt 2035

gaacccagga gttcagggtc atagcatgct gtgattgtgc ctacgaatag ccactgcata 2095

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ctgcttaatg gatggagact ggacgagaac ctggctgctg tggttctgaa c atg gcc 177
Met Ala
1

cag agc cct gtg tct gcc gag gtc att cac cag gtg gaa gag tgt ctt 225
Gln Ser Pro Val Ser Ala Glu Val Ile His Gln Val Glu Glu Cys Leu
5 10 15

gat gaa gac gag aag gag atg atg ctc ttc ctg tgt aga gat gtg act 273
Asp Glu Asp Glu Lys Glu Met Met Leu Phe Leu Cys Arg Asp Val Thr
20 25 30

gag aac ctg gct gca cct aac gtc agg gac ctc ctg gat agc tta agt 321
Glu Asn Leu Ala Ala Pro Asn Val Arg Asp Leu Leu Asp Ser Leu Ser
35 40 45 50

gag aga ggc cag ctc tct ttt gct acc ttg gct gaa ttg ctc tac aga 369
Glu Arg Gly Gln Leu Ser Phe Ala Thr Leu Ala Glu Leu Leu Tyr Arg
55 60 65

gtg agg cgg ttt gac ctt ctc aag agg atc ttg aag aca gac aaa gca 417
Val Arg Arg Phe Asp Leu Leu Lys Arg Ile Leu Lys Thr Asp Lys Ala
70 75 80

acc gtg gag gac cac ctg cgc aga aac cct cac ctg gtt tct gat tat 465
Thr Val Glu Asp His Leu Arg Arg Asn Pro His Leu Val Ser Asp Tyr
85 90 95

agg gtc ctg ctg atg gag att ggt gag agc tta gat cag aac gat gta 513
Arg Val Leu Leu Met Glu Ile Gly Glu Ser Leu Asp Gln Asn Asp Val
100 105 110

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tcc tcc tta gtt ttc ctt aca agg gat tac aca ggc aga ggc aag ata      561
Ser Ser Leu Val Phe Leu Thr Arg Asp Tyr Thr Gly Arg Gly Lys Ile
115                 120                 125                 130

gcc aag gac aag agt ttc ttg gat ctg gtg att gaa ttg gag aaa ctg      609
Ala Lys Asp Lys Ser Phe Leu Asp Leu Val Ile Glu Leu Glu Lys Leu
                135                 140                 145

aat cta att gct tca gac caa ttg aat ttg tta gaa aaa tgc ctg aag      657
Asn Leu Ile Ala Ser Asp Gln Leu Asn Leu Leu Glu Lys Cys Leu Lys
            150                 155                 160

aac atc cac aga ata gac ttg aac aca aag atc cag aag tac acc cag      705
Asn Ile His Arg Ile Asp Leu Asn Thr Lys Ile Gln Lys Tyr Thr Gln
        165                 170                 175

tcc agc caa gga gca aga tca aat atg aat act ctc cag gct tcg ctc      753
Ser Ser Gln Gly Ala Arg Ser Asn Met Asn Thr Leu Gln Ala Ser Leu
    180                 185                 190

cca aaa ttg agt atc aag tat aac tca agg ctc cag aat ggg cga agt      801
Pro Lys Leu Ser Ile Lys Tyr Asn Ser Arg Leu Gln Asn Gly Arg Ser
195                 200                 205                 210

aaa gag cca aga ttt gtg gaa tac cgt gac agt caa aga aca ctg gtg      849
Lys Glu Pro Arg Phe Val Glu Tyr Arg Asp Ser Gln Arg Thr Leu Val
                215                 220                 225

aag aca tcc atc cag gaa tca gga gct ttt tta cct ccg cac atc cgt      897
Lys Thr Ser Ile Gln Glu Ser Gly Ala Phe Leu Pro Pro His Ile Arg
            230                 235                 240

gaa gag act tac agg atg cag agc aag ccc cta gga atc tgc ttg atc      945
Glu Glu Thr Tyr Arg Met Gln Ser Lys Pro Leu Gly Ile Cys Leu Ile
        245                 250                 255

att gat tgt att ggc aac gac aca aaa tat ctt caa gag acc ttc act      993
Ile Asp Cys Ile Gly Asn Asp Thr Lys Tyr Leu Gln Glu Thr Phe Thr
    260                 265                 270

tcc ctg ggc tat cat atc cag ctt ttc ttg ttt ccc aag tca cat gac     1041
Ser Leu Gly Tyr His Ile Gln Leu Phe Leu Phe Pro Lys Ser His Asp
275                 280                 285                 290

ata acc cag att gtt cgc cga tat gca agt atg gcc caa cat caa gac     1089
Ile Thr Gln Ile Val Arg Arg Tyr Ala Ser Met Ala Gln His Gln Asp
                295                 300                 305

tat gac agc ttt gca tgt gtt ctg gtg agc cta gga ggc tcc caa agc     1137
Tyr Asp Ser Phe Ala Cys Val Leu Val Ser Leu Gly Gly Ser Gln Ser
            310                 315                 320

atg atg ggc aga gat caa gtt cac tca ggg ttc tcc ttg gat cat gtc     1185
Met Met Gly Arg Asp Gln Val His Ser Gly Phe Ser Leu Asp His Val
        325                 330                 335

aag aac atg ttc acg ggg gac acg tgc cct tct ctc aga ggg aag cca     1233
Lys Asn Met Phe Thr Gly Asp Thr Cys Pro Ser Leu Arg Gly Lys Pro
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aag ctc ttt ttt att cag aac tat gag tcg tta ggt agc cag ttg gaa     1281
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Lys Leu Phe Phe Ile Gln Asn Tyr Glu Ser Leu Gly Ser Gln Leu Glu
355                 360                 365                 370

gat agc agc ctg gag gta gat ggg cca tca ata aaa aat gtg gac tct    1329
Asp Ser Ser Leu Glu Val Asp Gly Pro Ser Ile Lys Asn Val Asp Ser
                375                 380                 385

aag ccc ctg caa ccc aga cac tgc aca act cac cca gaa gct gat atc    1377
Lys Pro Leu Gln Pro Arg His Cys Thr Thr His Pro Glu Ala Asp Ile
            390                 395                 400

ttt tgg agc ctg tgc aca gca gac gta tct cac ttg gag aag ccc tcc    1425
Phe Trp Ser Leu Cys Thr Ala Asp Val Ser His Leu Glu Lys Pro Ser
        405                 410                 415

agc tca tcc tct gtg tat ctg cag aag ctc tcc cag cag ctg aag caa    1473
Ser Ser Ser Ser Val Tyr Leu Gln Lys Leu Ser Gln Gln Leu Lys Gln
    420                 425                 430

ggc agg aga cgc cca ctc gtg gac ctc cac gtt gaa ctc atg gac aaa    1521
Gly Arg Arg Arg Pro Leu Val Asp Leu His Val Glu Leu Met Asp Lys
435                 440                 445                 450

gtg tat gcg tgg aac agt ggt gtt tcg tct aag gag aaa tac agc ctc    1569
Val Tyr Ala Trp Asn Ser Gly Val Ser Ser Lys Glu Lys Tyr Ser Leu
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agc ctg cag cac act ctg agg aag aaa ctc atc ctg gct cct acg tga    1617
Ser Leu Gln His Thr Leu Arg Lys Lys Leu Ile Leu Ala Pro Thr
            470                 475                 480

gaaccccaga ccgttggtgt tcttggtata tcatccaggg tggcggcttg gagcagagct  1677

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tcctgtgcac aggcatgagc cgtaaccctg tgcctgggaa acgtctcact cccgccgccg  1797

tgcctttacc tctctaaact tccctactta cattccttag tcggatgttt tgccagagtg  1857

tggagaacag taagacataa acctattgtt tgtttgtttt tttgggggggg aggttatcta  1917

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catctaatca tttaataagt aattacctca ttaagtaccc attgcttcag gactttcaca  2097

ttggccacca atttctgtga cccagctcca catttatatt ctctttctgc aaaaccaaat  2157

ttcattatgt ctgtttaata tctacagtct aatgctttgt aagacatcta gatagaaaaa  2217

tagttaccca tgagcacaga agggctggcc tgaccctcac cagctgtgca gtggcttcgg  2277

tgaaggagaa tgagccctac tccttgaagg ttgtagtgct tgggagagca gtctgtacct  2337

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Met Ala Gln Ser Pro Val Ser Ala Glu Val Ile His
1 5 10

cag gtg gaa gag tgt ctt gat gaa gac gag aag gag atg atg ctc ttc 158
Gln Val Glu Glu Cys Leu Asp Glu Asp Glu Lys Glu Met Met Leu Phe
15 20 25

ctg tgt aga gat gtg act gag aac ctg gct gca cct aac gtc agg gac 206
Leu Cys Arg Asp Val Thr Glu Asn Leu Ala Ala Pro Asn Val Arg Asp
30 35 40

ctc ctg gat agc tta agt gag aga ggc cag ctc tct ttt gct acc ttg 254
Leu Leu Asp Ser Leu Ser Glu Arg Gly Gln Leu Ser Phe Ala Thr Leu
45 50 55 60

gct gaa ttg ctc tac aga gtg agg cgg ttt gac ctt ctc aag agg atc 302
Ala Glu Leu Leu Tyr Arg Val Arg Arg Phe Asp Leu Leu Lys Arg Ile
65 70 75

ttg aag aca gac aaa gca acc gtg gag gac cac ctg cgc aga aac cct 350
Leu Lys Thr Asp Lys Ala Thr Val Glu Asp His Leu Arg Arg Asn Pro
80 85 90

cac ctg gtt tct gat tat agg gtc ctg ctg atg gag att ggt gag agc 398
His Leu Val Ser Asp Tyr Arg Val Leu Leu Met Glu Ile Gly Glu Ser
95 100 105

tta gat cag aac gat gta tcc tcc tta gtt ttc ctt aca agg att aca 446
Leu Asp Gln Asn Asp Val Ser Ser Leu Val Phe Leu Thr Arg Ile Thr
110 115 120

agg gat tac aca ggc aga ggc aag ata gcc aag gac aag agt ttc ttg 494
Arg Asp Tyr Thr Gly Arg Gly Lys Ile Ala Lys Asp Lys Ser Phe Leu
125 130 135 140

gat ctg gtg att gaa ttg gag aaa ctg aat cta att gct tca gac caa 542
Asp Leu Val Ile Glu Leu Glu Lys Leu Asn Leu Ile Ala Ser Asp Gln
145 150 155

ttg aat ttg tta gaa aaa tgc ctg aag aac atc cac aga ata gac ttg 590
Leu Asn Leu Leu Glu Lys Cys Leu Lys Asn Ile His Arg Ile Asp Leu
160 165 170

aac aca aag atc cag aag tac acc cag tcc agc caa gga gca aga tca 638
Asn Thr Lys Ile Gln Lys Tyr Thr Gln Ser Ser Gln Gly Ala Arg Ser
175 180 185

aat atg aat act ctc cag gct tcg ctc cca aaa ttg agt atc aag tat 686
Asn Met Asn Thr Leu Gln Ala Ser Leu Pro Lys Leu Ser Ile Lys Tyr

190 195 200

aac tca agg gtg agt ctg gag cca gtg tat gga gta cca gca tga 731
Asn Ser Arg Val Ser Leu Glu Pro Val Tyr Gly Val Pro Ala
205 210 215

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tagtagtgtt caaaaatata tttggaaaaa tttatgaaat atataacaag aaaataattt 911

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ctaacgtcag ggacctcctg gatagcttaa gtgagagagg ccagctctct tttgctacct 480

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